

ABSTRACT OF THE INVENTION

The invention is directed to a method of modulating paraptotic cell death in a cell by contacting the cell with an effective amount of a compound selected from the group consisting of ceramide, Tumor Necrosis Factor (TNF), caspase-7, caspase-8,  $\alpha$ -amino-3-hydroxy-5-methyl-4-isoxazole proprionic acid (AMPA), kainic acid and glutamic acid, wherein the effective amount of the compound induces paraptotic death of the cell. The invention further is directed to a method of inhibiting paraptotic cell death in a cell by contacting the cell with an effective amount of a compound selected from the group consisting of Alg-2-interacting protein 1 (AIP-1), Jun N-terminal kinase 1 (JNK1) neutralizing agent, Jun N-terminal kinase 2 (JNK2) neutralizing agent, TNF Receptor-Associated Factor 2 (TRAF2) neutralizing agent, ortho-phenanthroline and the JNK inhibitor SP 600125, wherein the effective amount of the compound inhibits paraptotic death of the cell.

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